AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A biostimulation method for reducing or eliminating pathogens, such as bacteria, fungi or viruses, in oral cavity tissue, comprising:

inserting at least a portion of a phototherapy applicator into the oral cavity;

irradiating an area of tissue in ~~at least a portion of a subject's~~ the oral cavity with radiation from the phototherapy applicator, the radiation having at least one selected wavelength component corresponding to the absorption spectrum of an endogenous light acceptor;

wherein the area of tissue is irradiated so as to cause a reduction in the number of pathogens within the oral cavity without application of an exogenous photosensitizer during the biostimulation method. ~~desired biostimulating effect, wherein said radiation is applied to said portion of the oral cavity during multiple treatment sessions so as to administer a selected total dose of radiation to said portion~~.

2. (Currently Amended) The method of claim 1, wherein said light acceptor is located within the pathogens being irradiated ~~irradiating step comprises exposing soft tissue in the subject's oral cavity to said radiation~~.

3. (Currently Amended) The method of claim 1, wherein said light acceptor is located within the tissue being irradiated ~~irradiating step comprises exposing facial tissue in to said radiation~~.

4. (Cancelled)

5. (Original) The method of claim 1, further comprising selecting a radiation power administered during each of said treatment sessions to be less than about 10 W.

6. (Currently Amended) The method of claim 1 [4], further comprising selecting a time duration of each of said treatment sessions to be in a range of about 10 s to about 1000 s.

7. (Currently Amended) The method of claim 1, further comprising irradiating the area of tissue with a second selected wavelength component that causes at least one of the biostimulative effects selected from the group consisting of ~~wherein said biostimulating effect causes any of an~~ increased blood and lymph microcirculation ~~in said irradiated portion~~, activation of blood microcirculation in tooth pulp and gum, increased local macrophage activity, increased fibroblast proliferation, increased osteoblast proliferation, increased ~~and~~ odontoblast proliferation, killing of at least one of bacteria, fungi, and viruses in the oral cavity, normalization of the oral cavity pH, killing of viruses within the subject's blood microcirculatory system, light-induced destruction of selected metabolic blood components, reduction of gum bleeding, reduction of tooth hypersensitivity, pain reduction in teeth and throat, periodontal and bone regeneration, implant, crown and filling connection improvement, reminaralization of enamel, prevention of caries, root canal sterilization, oral inflammation prevention and periodontol disease prevention and healing.

8. (Currently Amended) The method of claim 1, wherein the step of irradiating results in a biostimulative effect that includes at least one of ~~wherein said biostimulating effect includes~~ prevention and improvement in at least one of oral mucus inflammatory disease, tongue disease, recovery from inflammation of salivary glands and small sublingual ducts, and pain reduction in oral tissue, sore throat, angina, acute or chronic tonsillitis, sinusitis recovery, recovery of inflammations of vocal cords and cancer prevention of tissues accessible from the oral cavity.

9. (Currently Amended) The method of claim 1, wherein the light acceptor is at least one light acceptor selected from the group consisting of porphyrins, cytochromes, molecular oxygen, coproporphyrins, cytochroms, cytogem, cytochromoxidase, cytoporphyrin, protoporphyrin IX, and bilirubin ~~further utilizing an oral applicator sized and shaped for placement in the oral cavity and incorporating a radiation source to irradiate the oral cavity~~.

10. (Currently Amended) The method of claim 1, wherein the light acceptor is responsive to electromagnetic radiation other than visible light ~~said irradiating step comprises directing~~

~~radiation having a selected wavelength band to an area of the subject's oral cavity so as to deposit a dose of radiation below the facial skin to provide a dermatological treatment~~.

11. (Currently Amended) The method of claim 10, wherein the radiation from the phototherapy applicator has at least one second selected wavelength component corresponding to the absorption spectrum of a second endogenous light acceptor;

wherein the second endogenous light acceptor is different in kind from first endogenous light acceptor ~~wherein said dermatological treatment comprises any of treating of facial follicles, epidermis, vascular, lump, muscular, subcutaneous fat, collagen, improvement of acne, hair growth control, wrinkle reduction, skin texture improvement, skin tone improvement, skin oiliness improvement, skin lifting, lip texture and elasticity improvement, treatment of lips diseases, perioral cheeks and lips vascular improvement and perioral dermatitis treatment~~.

12. (Currently Amended) The method of claim 11, wherein the first endogenous light acceptor is a porphyrin and the second endogenous light acceptor is molecular oxygen ~~said irradiating step comprises directing said radiation to the oral cavity over multiple treatment sessions so as to deposit a radiation dose below said facial skin sufficient to provide said dermatological treatment~~.

13. (Currently Amended) The method of claim 1 ~~12~~, further comprising selecting a radiation power administered ~~during each of said treatment sessions~~ to be less than about 10 W.

14. (Original) The method of claim 1, further comprising selecting said wavelength component such that an irradiated tooth in the oral cavity substantially guides said radiation to any of the tooth pulp, root and tooth apex.

15. (Original) The method of claim 1, further comprising selecting said wavelength component to be in a range of about 0.38 to about 0.6 microns so as to cause controlled heating oral cavity tissue at a depth below mucosal lining.

16. (Original) The method of claim 1, further comprising selecting said wavelength component to be in a range of about 0.8 microns to about 100 microns so as to cause controlled heating of oral cavity tissue at a depth below the mucosal lining.

17. (Currently Amended) The method of claim 1, further comprising selecting said wavelength component to be in a range of about 0.28 ~~0.6~~ microns to about 1.4 ~~1.3~~ microns ~~so as to treat facial tissue~~.

18. (Previously Presented) A biostimulation method, comprising:

irradiating at least a portion of a subject's oral cavity with radiation having at least one selected wavelength component so as to cause a desired biostimulating effect;

irradiating at least a portion of a subject's oral cavity with radiation having wavelength components within a first bandwidth at a first selected time during the subject's circadian cycle, and

irradiating at least a portion of the subject's oral cavity with radiation having wavelength components within a second bandwidth at a second selected time during the subject's circadian cycle.

19. (Currently Amended) The method of claim 1, further comprising detecting diagnostic signals from said area of tissue ~~irradiated portion~~ to monitor treatment results.

20. (Currently Amended) A method of treating a subject's blood, comprising:

inserting at least a portion of a phototherapy device into an oral cavity;

irradiating ~~exposing~~ at least a portion of the tissue within the ~~a subject's~~ oral cavity ~~to~~ with radiation having at least one selected wavelength range ~~components~~ to irradiate blood flowing in vasculature of the oral cavity, the wavelength range being capable of being accepted by an endogenous light acceptor within the tissue ~~wherein the oral cavity is irradiated with said radiation during separate treatment sessions such that a radiation power in a range greater than 10 mW to about 10 W is administered to the oral cavity during each treatment session~~.

21. (Currently Amended) The method of claim 20, further comprising irradiating the at least a portion of the tissue within the oral cavity with a second selected wavelength range being capable of being accepted by a second endogenous light acceptor within the tissue, wherein said second endogenous light acceptor is of a different type than the first endogenous light acceptor. ~~utilizing an oral applicator incorporating one or more radiation sources to irradiate the oral cavity~~.

22. (Currently Amended) The method of claim 20, further comprising selecting said wavelength range ~~components~~ to be in a range of about 280 nm to about 1.8 microns.

23. (Original) The method of claim 20, further comprising selecting said radiation to be in a range of about 280 nm to about 400 nm.

24. (Original) The method of claim 20, further comprising selecting said radiation to be in a range of about 300 nm to about 320 nm.

25. (Cancelled)

26. (Original) The method of claim 25, wherein said radiation power is in a range of about 1 mW to about 1 W.

27. (Previously Presented) The method of claim 20, wherein the step of exposing further comprises exposing substantially an entire volume of the subject's blood to said radiation over one or more treatment cycles.

28. (Original) The method of claim 20, wherein said radiation causes killing of pathogens in the blood.

29. (Currently Amended) The method of claim 28, wherein said pathogens are any of bacteria, fungi and viruses.

30. (Currently Amended) The method of claim 20, wherein the light acceptor is at least one light acceptor selected from the group consisting of bilirubin, porphyrins, cytochromes, molecular oxygen, coproporphyrins, cytochroms, cytogem, cytochromoxidase, cytoporphyrin, and protoporphyrin IX ~~further comprising introducing a photodynamic agent into the subject's circulatory system and selecting one or more of said wavelength components for activating said agent~~.

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

44. (Cancelled)

45. (Cancelled)

46. (Cancelled)

47. (Cancelled)

48. (New) The method of claim 1, wherein the radiation has a power density of 1-1000 mW/cm^2 and a one-day dose of 0.06-30 J/cm^2.

49. (New) The method of claim 1, further comprising selecting said wavelength range to be in a range of about 280 nm to about 1.8 microns.

50. (New) The method of claim 20, wherein the light acceptor is located within blood in the tissue.

51. (New) The method of claim 20, wherein the light acceptor is located within pathogens contained within blood in the tissue.